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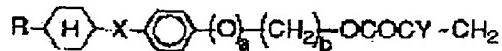
(21)Application number : 05-024126 (71)Applicant : DAINIPPON INK & CHEM INC  
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## (54) ACRYLATE COMPOUND AND LIQUID CRYSTAL DEVICE PRODUCED BY USING THE COMPOUND

### (57)Abstract:

**PURPOSE:** To obtain a light-scattering liquid crystal device having a light-modulation layer composed of a transparent solid substance consisting of a specific polymer and a liquid crystal material, exhibiting a narrow hysteresis width under the application of voltage and enabling high-quality gradient display.

**CONSTITUTION:** This device has a light-modulation layer composed of a transparent solid substance and a liquid crystal material and formed by placing a light-modulation layer constituent material containing a polymerizable composition, a liquid crystal material and optionally a polymerization initiator, a chain transfer agent, a photosensitizer, etc., between a pair of substrates each having an electrode layer and either one or both having transparency (e.g. a glass substrate) and polymerizing the polymerizable composition by the irradiation with ultraviolet rays e.g. through the transparent substrate. The polymerizable composition contains a monofunctional acrylate compound expressed by the formula (R is a 1-20C alkyl, etc.; X is CH<sub>2</sub>CH<sub>2</sub>, etc.; Y is H or methyl; (a) is 0 or 1; (b) is an integer of 0-10 when a=0 and is an integer of 1-10 when a=1) [e.g. 4-(trans-4-nbutylcyclohexyl)phenyl acrylate].



### LEGAL STATUS

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